



BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Powers Fasteners, Inc.
2 Power Square.
New Rochelle, N.Y. 10801

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Concrete Anchors

APPROVAL DOCUMENT: Drawing No. MDC-02, Sheets 1 through 4 of 4, titled "Calk-In Anchor, Power-Bolt Anchor, Tapper Anchor & Spike Anchor" dated 07/14/03 with last revision on 09/24/03, prepared by Power Fasteners, Inc., signed and sealed by L. W. Mattis PE, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance (NOA) number and approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: None

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.


ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1, evidence page as well as approval document mentioned above.

The submitted documentation was reviewed by ~~Candido F. Font~~, P.E.




11/13/03

NOA No 03-0303.14
Expiration Date: November 13, 2008
Approval Date: November 13, 2003
Page 1

Power Fasteners, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE PAGE

A DRAWINGS:

1. Drawings prepared by Powers Fasteners Inc, titled "Calk-In Anchor, Power-Bolt Anchor, Tapper Anchor & Spike Anchor"; Drawing No. MDC-02, dated 07/14/03 with last revision on 09/24/03, sheet 1 through 4 of 4, signed and sealed by L. W. Mattis PE.

B TEST:

	Laboratory No.	Test Report.	Date.	Signature
1.	CTI (Calk-In)	ASTM E488	10/13 & 26/93	L.W. Mattis PE.
2.	CEL 9R63	ASTM E488	09/16/99	L.W. Mattis PE.
3.	CTI 5R07B	ASTM E488	06/28/95	L.W. Mattis PE.
4.	CEL 9R62	ASTM E488	09/09/99	L.W. Mattis PE.
5.	CTI 7R44	ASTM E488	11/07/97	L.W. Mattis PE.
6.	ARL 30388	PA 114 App E.	10/10/02	C.A. Hamon PE.

C CALCULATIONS:

N/A

D QUALITY ASSURANCE.

1. Miami-Dade Quality Control Division.

E MATERIAL CERTIFICATIONS:

N/A

F STATEMENTS:

1. No change letter issued by Power Fasteners Inc on 07/20/03, signed by M. Gaffigan and notarized by L. Bailey.
2. No interest letter issued by Powers Fasteners on 07/20/03, signed by M. Gaffigan and notarized by L. Bailey.
3. Code compliance letter issued by CEL Consulting on 07/14/03 and signed by L. Mattis PE.



Candido F. Font, P.E.

Senior Product Control Examiner

NOA No 03-0303.14

Expiration Date: November 13, 2008

Approval Date: November 13, 2003

DESCRIPTION AND MATERIAL:

The 1/4 inch diameter x 7/8 inch long Calk-In anchor is a cast calking type machine bolt anchor made of antimonial lead sleeve and zamac alloy cone. It is chamfered at the top for easy screw start in and the collar prevents the cone from being drawn up through the sleeve when over loads exceeding the allowable loads are applied.

CALK-IN ANCHOR

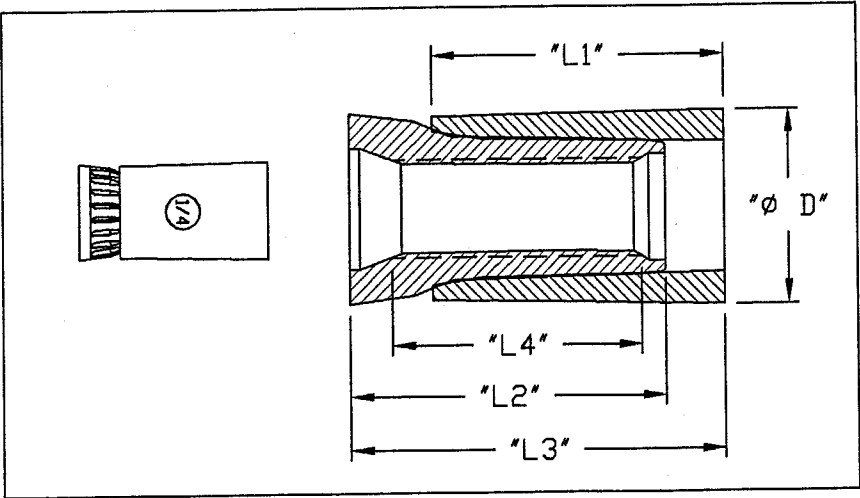


TABLE No. 1

CALK-IN ANCHOR - Dimensions.

Anchor Dia. (inches)	Ass'y Dia "D"	Sleeve Length "L1"	Cone Length "L2"	Ass'y Length "L3"	Thread Length "L4"
#1/4-20	1/2"	3/4"	3/4"	5/16"	19/32"

TABLE No. 2

CALK-IN ANCHOR - Allowable Design Loads in Concrete.

Anchor Dia. (inches)	Embedment Depth (inches)	Minimum Edge Distance (inches)	2000 psi Concrete		4000 psi Concrete	
			Tension (pounds)	Shear (pounds)	Tension (pounds)	Shear (pounds)
1/4	7/8	3	320	340	365	300
1/4	7/8	1-1/4	-	110	-	235

TABLE No. 3

CALK-IN ANCHOR - Allowable Design Loads in CMU per ASTM C 90

Anchor Dia. (inches)	Embedment Depth (inches)	ASTM C 90 Masonry Block	
		Tension (pounds)	Shear (pounds)
1/4	7/8	105	310

1. Edge and end distances 3-3/4" minimum for 100% allowable load.
2. Masonry Block ASTM C90, normal weight.
3. Allowable loads based on ultimate load with a 4:1 safety factor.
4. Spacing shall be 3 times the anchor embedment for 100% capacity and 1.5 times the anchor embedment for 50% capacity.

Approved as complying with the
Miami-Dade County Code
11/13/03
03.0363.14
Miami-Dade Product Control
Division
By: [Signature]

Renumbered & table revisions for approval	9/24/03
REVISION DESCRIPTION	DATE

MIAMI DADE COUNTY - PRODUCT APPROVAL

 Lee W. Matt 9/24/03	TITLE CALK-IN ANCHOR		
	Powers Fasteners, Inc. 2 Powers Square New Rochelle, N.Y. 10801		
	DATE OF ISSUE: 7/14/03	SHEET No. 1 OF 4	DRAWING No. MDC-02

DESCRIPTION AND MATERIAL:

The Power-Bolt (Rawl-Bolt) is a single unit, removable anchor bolt assembly with a finished hex or flat head design. The anchor is made of carbon steel, zinc plated with a supplemental chromatic finish in accordance with ASTM B633 or grades 304 and 303 Stainless Steel. The slotted, oversized annular ring on the bottom of the cone is compressed until it matches perfectly with the anchor hole, preventing it from spinning while being tightened. The anchor consists of a finished hex head bolt complying with ASTM A449, a hardened washer complying with ANSI B18.22.1-1965, a nylon compression ring, a precision stamped tubular expander sleeve manufactured from AISI 1010-1020 steel and a single hardened and partially slotted cone manufactured from AISI 12L14 steel.

POWER-BOLT

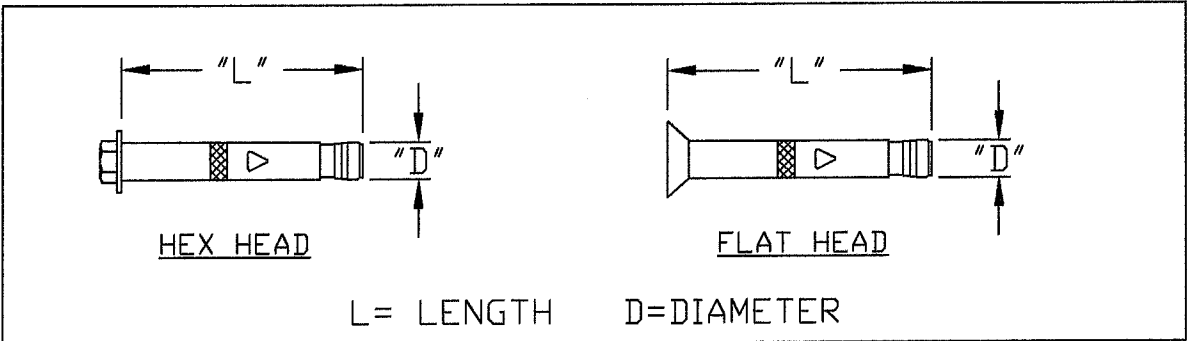


TABLE No. 1

POWER-BOLT - Allowable Design Loads for Carbon Steel Anchors.

Anchor Dia. (inches)	Embedment Depth (inches)	Installation Torque (ft-lbs)	2000 psi Concrete		4000 psi Concrete		6000 psi Concrete	
			Tension (pounds)	Shear (pounds)	Tension (pounds)	Shear (pounds)	Tension (pounds)	Shear (pounds)
1/4	1-1/4	3-4	250	515	250	530	250	530
	1-3/4	3-4	270	515	265	530	300	530
	2-1/2	3-4	270	515	280	845	380	845
3/8	2	28-35	780	995	1,145	1,605	1,480	1,605
	2-1/2	28-35	840	995	1,215	1,605	1,665	1,605
	3-1/2	28-35	1,100	995	1,500	2,165	1,790	2,165
1/2	2-1/2	48-60	1,075	1,710	1,465	2,055	1,830	2,055
	3-1/2	48-60	1,205	1,710	2,050	2,055	2,470	2,055
	5	48-60	1,255	1,710	2,220	3,080	2,735	3,080
5/8	2-3/4	80-100	820	1,995	1,925	2,995	2,125	2,995
	4	80-100	1,295	1,995	2,190	2,995	3,275	2,995
	6	80-100	1,295	1,995	2,735	4,670	3,390	4,670
3/4	3	96-120	1,415	3,095	2,045	4,025	2,695	4,025
	4-1/2	96-120	1,450	3,095	2,715	4,025	3,465	4,025
	7	96-120	1,495	3,095	3,300	6,510	4,850	6,510

1. Allowable loads are based on ultimate load with a 4:1 safety factor.
2. Spacing and edge distance shall be in accordance with Table No. 2.
3. The allowable loads may be increased 33-1/3% for short term loading due to seismic or wind forces.
4. Do not exceed maximum torque in indicated ranges.

TABLE No. 2

POWER-BOLT ANCHOR - Allowable Spacing and Edge Distance.

	DISTANCE FOR FULL ANCHOR CAPACITY (Critical Distance) ¹	DISTANCE FOR REDUCED ANCHOR CAPACITY (Minimum Distance) ²	REDUCTION FACTOR ³
SPACING BETWEEN ANCHORS	4E	2.0E	0.50
EDGE DISTANCE - TENSION	12D	5D	0.70
EDGE DISTANCE - SHEAR	12D	5D	0.35

1. The listed values are the minimum distances required to obtain the load values listed in Table No. 1.
D= Anchor Diameter. When adjacent anchors are different sizes or embedments, use largest value of D.
E= Embedment depth
2. The listed values are the minimum distances at which the anchor can be set, when load values are adjusted appropriately.
3. Load values in the table are multiplied by the reduction factor when anchors are installed at the minimum distances listed.
Use linear interpolation for spacing between critical and minimum distances. Multiple reduction factors for more than one spacing or edge distance shall be calculated separately and multiplied.

TABLE No. 3

POWER-BOLT - Allowable Design Loads for Stainless Steel Anchors.

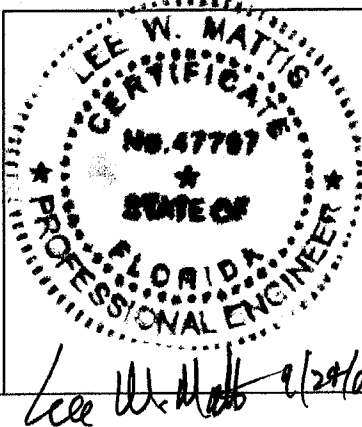
Anchor Dia. (inches)	Embedment Depth (inches)	Installation Torque (ft-lbs)	2000 psi Concrete	
			Tension (pounds)	Shear (pounds)
3/8	2	25-35	760	1305
1/2	2-3/8	45-60	995	1795
5/8	2-3/4	80-100	-	2500
3/4	3	90-120	1625	2855

Approved as complying with the Florida Building Code
Date 11/13/03
NOAC 03-0303.14
Miami Dade Product Control
By [Signature]

1. Allowable loads are based on ultimate load with a 4:1 safety factor.
2. Spacing and edge distance shall be in accordance with Table No. 2.
3. The allowable loads may be increased 33-1/3% for short term loading due to seismic or wind forces.
4. Do not exceed maximum torque in indicated ranges.

Renumbered & table revisions for approval	9/24/03
REVISION DESCRIPTION	DATE

MIAMI DADE COUNTY - PRODUCT APPROVAL



TITLE POWER-BOLT ANCHOR		
2 Powers Square Powers Fasteners, Inc. New Rochelle, N.Y. 10801		
DATE OF ISSUE: 7/14/03	SHEET No. 2 OF 4	DRAWING No. MDC-02

DESCRIPTION AND MATERIAL:

The 3/16 inch and 1/4 inch Tapper concrete screw anchors are made of a heat treated carbon steel with a flouropolymer coating. The 3/8 inch Tapper concrete screw anchors are made of a heat treated carbon steel, zinc plated in accordance with ASTM B 633. A 1/4 inch stainless steel and zinc plated version is also available. The Tapper anchors are self-tapping screw type anchors designed to be installed in a hole predrilled with a special bit matched to the diameter of the anchor. A hex nut or Phillips type driver adapter is installed in a standard drill. The anchors are installed by turning with the drill and adapter, which causes the anchor threads to cut mating threads in the concrete. Anchor body is made of AISI 1022 steel, zinc plated per ASTM B633 SCI Type III or Perma-Seal flouropolymer. Type 304 & 410 Stainless Steel Tappers are available.

TAPPER ANCHOR

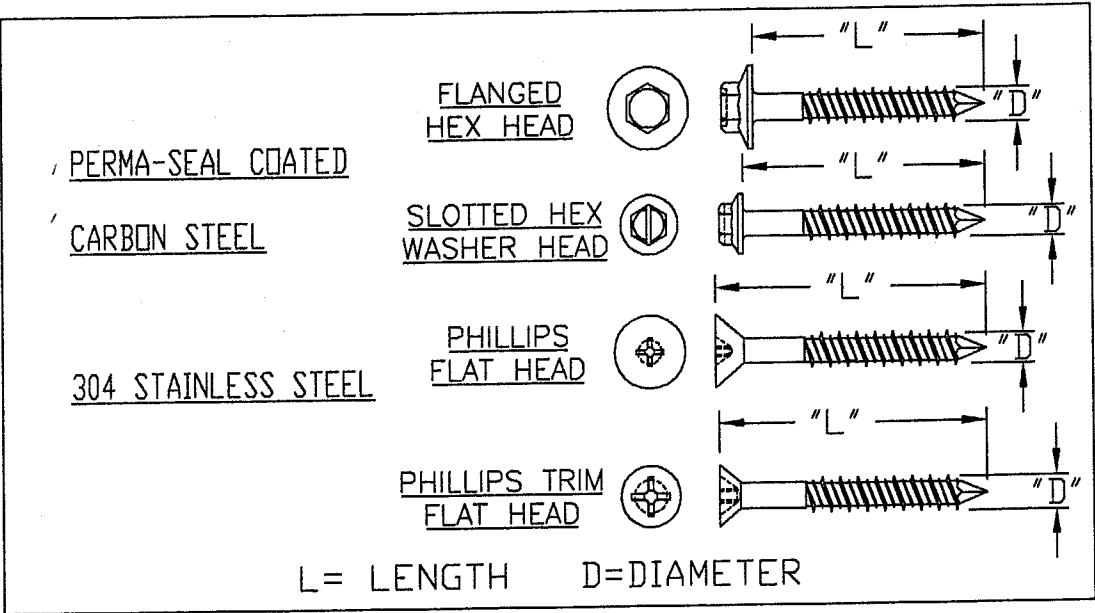


TABLE No. 1

TAPPER – Allowable Design Loads for Carbon Steel Anchors.

Anchor Dia. (inches)	Embedment Depth (inches)	ASTM C-90 Masonry Block		2000 psi Concrete		4000 psi Concrete	
		Tension (pounds)	Shear (pounds)	Tension (pounds)	Shear (pounds)	Tension (pounds)	Shear (pounds)
3/16	1	-	-	40	175	90	175
	1-3/8	150	305	-	-	-	-
	1-1/2	-	-	220	235	255	235
	1-3/4	-	-	295	235	375	235
1/4	1	-	-	155	210	265	210
	1-3/8	300	455	-	-	-	-
	1-1/2	-	-	250	360	410	360
	1-3/4	-	-	410	370	440	370
3/8	1	-	-	175	240	190	240
	1-1/2	-	-	280	500	385	500
	1-3/4	-	-	380	585	540	585

1. Allowable loads are based on ultimate load with a 4:1 safety factor.
2. Masonry tests performed in ASTM C 90 medium weight units; edge and end distances 3-3/4" minimum.
3. Concrete spacing and edge distances shall be in accordance with Table No. 2.

TABLE No. 2

TAPPER ANCHOR – Allowable Spacing and Edge Distance.

	DISTANCE FOR FULL ANCHOR CAPACITY (Critical Distance) ¹	DISTANCE FOR REDUCED ANCHOR CAPACITY (Minimum Distance) ²	REDUCTION FACTOR ³
SPACING BETWEEN ANCHORS	10D	5D	0.50
EDGE DISTANCE	16D	8D	0.50

1. The listed values are the minimum distances required to obtain the load values listed in Table No. 1. D= Anchor Diameter. When adjacent anchors are different sizes or embedments, use largest value of D. E= Embedment depth
2. The listed values are the minimum distances at which the anchor can be set, when load values are adjusted appropriately.
3. Load values in the table are multiplied by the reduction factor when anchors are installed at the minimum distances listed. Use linear interpolation for spacing between critical and minimum distances. Multiple reduction factors for more than one spacing or edge distance shall be calculated separately and multiplied.

TABLE No. 3

TAPPER – Allowable Design Loads for Stainless Steel Anchors.

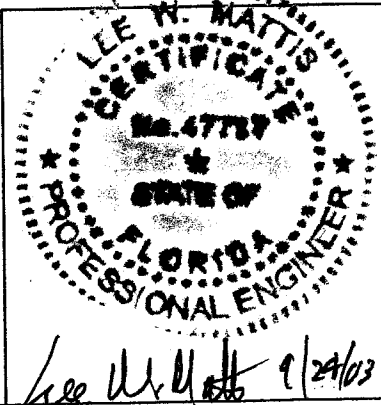
Anchor Dia. (inches)	Embedment Depth (inches)	2000 psi Concrete		4000 psi Concrete	
		Tension (pounds)	Shear (pounds)	Tension (pounds)	Shear (pounds)
1/4	1	140	295	180	295
	1-1/2	285	335	330	335
	1-3/4	485	425	430	425

1. Allowable loads are based on ultimate load with a 4:1 safety factor.
2. Spacing and edge distances shall be in accordance with Table No. 2.

Approved as complying with the Florida Building Code
Date 11/13/03
By 0310303.14
Without Under Product Control
Division
By

Renumbered & table revisions for approval	9/24/03
REVISION DESCRIPTION	DATE

MIAMI DADE COUNTY – PRODUCT APPROVAL



TITLE TAPPER ANCHOR		
Powers Fasteners, Inc. 2 Powers Square New Rochelle, N.Y. 10801		
DATE OF ISSUE: 7/14/03	SHEET No. 3 OF 4	DRAWING No. MDC-02

DESCRIPTION AND MATERIAL:

The SPIKE anchor is a single piece, deformed shank anchor formed from steel with various head configurations including a mushroom head & pipe version. The end to be inserted in the concrete is formed into an S shape configuration. Compression of this shank deformation results in a spring action which wedges the anchor against the side of the anchor hole providing resistance to removal. The anchor is zinc plated or coated with a fluoropolymer. The anchor is manufactured from C1038-1040 steel and heat treated to attain the mechanical properties of Grade 5. The anchor is plated with commercial bright zinc with clear chromate treatment in conformance with ASTM B633.

SPIKE ANCHOR

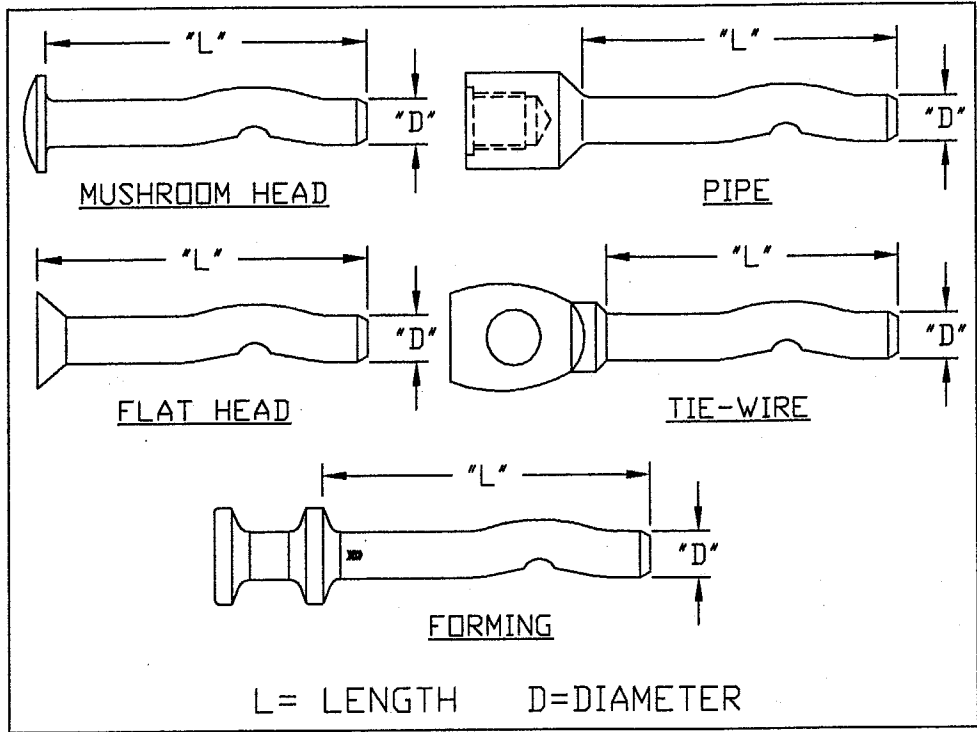


TABLE No. 1

SPIKE – Allowable Design Loads.

Anchor Dia. (inches)	Drill Bit Diameter (inches)	Embedment Depth (inches)	3000 psi Concrete		5000 psi Concrete	
			Tension (pounds)	Shear (pounds)	Tension (pounds)	Shear (pounds)
3/16	3/16	1-1/4	250	500	380	500
1/4	1/4	1-1/4	300	505	405	505
3/8	3/8	1-3/4	505	1,120	505	1,120
1/2	1/2	2-1/2	905	2,115	1,105	2,115

1. Allowable Loads are based on ultimate loads with a 4:1 safety factor.
2. Spacing and edge distance shall be in accordance with Table No. 3.
3. The allowable loads may be increased 33-1/3% for short term loading due to seismic or wind forces.
4. Allowable loads are for carbon steel anchors.

TABLE No. 2

PIPE SPIKE – Allowable Design Loads.

Anchor Dia. (inches)	Drill Bit Diameter (inches)	Embedment Depth (inches)	3000 psi Concrete Tension (pounds)	5000 psi Concrete Tension (pounds)
1/4	3/16	1-1/4	315	315
3/8	1/4	1-3/4	410	580

1. Allowable Loads are based on ultimate load with a 4:1 safety factor.

Approved as complying with the
Florida Building Code
Date 11/13/03
NOAH 03-6363.14
Miami Dade Product Control
By [Signature]

TABLE No. 3

SPIKE ANCHOR – Allowable Spacing and Edge Distance.

	DISTANCE FOR FULL ANCHOR CAPACITY (Critical Distance) ¹	DISTANCE FOR REDUCED ANCHOR CAPACITY (Minimum Distance) ²	REDUCTION FACTOR ³
SPACING BETWEEN ANCHORS	4E	2.0E	0.50
EDGE DISTANCE - TENSION	12D	5D	0.55
EDGE DISTANCE - SHEAR	12D	5D	0.26

1. The listed values are the minimum distances required to obtain the load values listed in Table No. 1. D= Anchor Diameter. When adjacent anchors are different sizes or embedments, use largest value of D. E = Embedment depth
2. The listed values are the minimum distances at which the anchor can be set, when load values are adjusted appropriately.
3. Load values in the table are multiplied by the reduction factor when anchors are installed at the minimum distances listed. Use linear interpolation for spacing between critical and minimum distances. Multiple reduction factors for more than one spacing or edge distance shall be calculated separately and multiplied.

Renumbered & table revisions for approval	9/24/03
REVISION DESCRIPTION	DATE

MIAMI DADE COUNTY – PRODUCT APPROVAL



TITLE SPIKE ANCHOR		
2 Powers Square Powers Fasteners, Inc. New Rochelle, N.Y. 10801		
DATE OF ISSUE: 7/14/03	SHEET No. 4 OF 4	DRAWING No. MDC-02

Lee W. Mattis 9/24/03